DOD's Most Powerful Supercomputer At ASC Supported By SGI and Brocade 4 GB/s SAN

SGI and Brocade Communications Systems, Inc. announced that the Aeronautical Systems Center (ASC) Major Shared Resource Center (MSRC) at Wright-Patterson Air Force Base, Ohio, has moved to a 4 gigabit storage infrastructure to lower complexity of data access and management and to meet performance needs driven by rapid growth in data and in compute power.

The changes to ASC MSRC's mass storage architecture as well as the recently installed 2,048-processor SGI Altix supercomputer at the ASC MSRC are part of the Department of Defense High Performance Computing Modernization Program's Technology Insertion for fiscal year 2005.

To help DoD users with their big data requirements, the ASC MSRC has installed a 130 TB SGI® InfiniteStorage TP9700 (SGI TP9700) storage array – the first 4 Gb RAID array available in the market – which combines a high-performance 4 Gbit/sec Fibre Channel architecture with increased host connectivity to deliver industry-leading levels of bandwidth. Government customers with data-intensive applications like the ASC MSRC will benefit from the increased connectivity provided by the TP9700's eight 4 Gbit/sec host channels and realize up to 1600 MB/sec of sustained bandwidth through these channels to the host servers or Fibre Channel SAN.

The TP9700 system's storage is available to servers via a Fibre Channel SAN and the SGI® InfiniteStorage Shared Filesystem CXFS™, the industry's fastest shared filesystem. A SAN provides direct, high-speed physical connections between multiple hosts and disk storage. CXFS provides the software infrastructure to allow simultaneous shared access to that storage—large files are shared, not moved, and all systems have direct access to all data. Bottlenecks caused by slow, congested networks or overloaded file servers are gone, so servers can take advantage of the full bandwidth of the SAN to read and write data directly to and from the disks where it resides.

In addition to the new array, the ASC MSRC has upgraded its Fibre Channel storage network by installing Brocade SilkWorm 4100 4 Gbit/sec midrange SAN switches. These Brocade switches create a fully redundant and managed 4 Gbit/sec storage network for the ASC MSRC, whereby all connections between the file servers, attached disk, and storage tape drives now can operate at twice the previous bandwidth.

The Brocade Silkworm 4100 SAN switches are a key component of the end-to-end 4 Gbit/sec storage solution that SGI delivered to ASC MSRC. The switches feature Ports-On-Demand scalability with configurations of 16, 24, and 32 Fibre Channel ports; redundant and hot-swappable power supplies and cooling fans; hot-swappable SFP media; hot code loading and activation; and extensive enterprise-level security, fabric management, and ease-of-use features. With auto-sensing ports, the SAN switches also provide full backward compatibility to existing 1 and 2 Gbit/sec SAN infrastructure.

The SGI InfiniteStorage TP9700 - the industry's first RAID system with a 4Gb per second Fibre Channel interface - offers twice the connectivity and bandwidth of previous models for lower infrastructure complexity and management costs as well as pure performance benefits. Comprehensive storage management capabilities and the ability to mix fibre channel disks and newer serial ATA disks behind a single controller add to the system's appeal. Available today from SGI and SGI resellers, the TP9700 is also included in SGI InfiniteStorage integrated solutions like the SAN and NAS 3000 and in select models of the DLM Server.

About the ASC MSRC

The Aeronautical Systems Center (ASC) Major Shared Resource Center (MSRC) is a computational science facility supporting Department of Defense (DoD) research, development, and test and evaluation communities with high-performance computing and visualization resources. Created as part of the DoD's High- Performance Computing Modernization Program (HPCMP), the ASC MSRC

High-Performance Computing Center is located on Wright-Patterson Air Force Base and is one of four DoD MSRC sites.

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